ADEQ Arizona Department of Environmental Quality

PUBLIC NOTICE

PROPOSED LEAKING UST (LUST) CASE CLOSURE

The Arizona Department of Environmental Quality (ADEQ) is considering closure of the following leaking underground storage tank (LUST) cases:

LUST Case File # 4968.01
Facility ID # 0-002392
Maricopa County

Greer Farms
3921 North 515th Avenue
Tonopah, Arizona 85354

The site is located at 3921 North 515th Avenue (also known as North Harquahala Valley Road) in Tonopah, Arizona and is currently occupied by an agricultural services maintenance shop consisting of a garage and covered equipment storage structure. The site has been used for agriculture since the mid-1970s, and was reportedly used for ranching for at least 20 years prior. New and used equipment lubricant oil, diesel fuel and gasoline are stored onsite in aboveground storage tanks. The site formerly contained one 1,000-gallon diesel underground storage tank (UST), one 2,000-gallon diesel UST and one 1,000-gallon unleaded gasoline UST and two dispensers which were removed in October 1998. At that time, holes were discovered in the 2,000-gallon diesel and 1,000-gallon gasoline UST. ADEQ assigned LUST File No. 4968.01 to the east end of the former UST system, namely the 2,000 gallon diesel fuel UST, on November 18, 1998.

The UST owner/operator was Greer Farms and had their consultant SCS conduct site characterization activities to investigate the extent and degree of impacted media associated with LUST File No. 4968.01. These investigations included the installation of groundwater monitor well MW-1 in August 2001 by Allen, Stephenson and Associates. Groundwater monitor wells MW-2 through MW-9 were subsequently installed by SCS and others between October 2007 and October 2015. The *Site Characterization Report* was approved in December 2007. Terranext, consultant to Greer Farms, installed and operated a soil vapor extraction (VE) and oxygen injection (OI) system between July 2009 and January 2011. The *Corrective Action Plan* was approved in February 2012. Cardno supervised corrective actions on behalf of Greer Farms beginning in March 2013 and continuing until the site's entry into the ADEQ State Lead program circa early 2015. Cardno conducted groundwater monitoring and sampling, supervised a three-day high vacuum dual phase extraction pilot test in January 2014, continued passive oxygen releasing compound applications initiated by SCS Engineers, advanced confirmation soil boring SB-1 in July 2014 and collected soil vapor samples at four temporary probes (SB1, SB2, SB3 and SB4) in August 2014. Due to its location in the former UST basin, ATC (formerly Cardno) oversaw the abandonment of well MW-1 in October 2015 prior to remedial excavation activities. Following the remedial excavation, ATC installed groundwater monitor well MW-1A approximately five feet southeast of the location of MW-1 in order to re-establish a source area monitor and chemical injection well. ATC conducted a soil excavation to a depth of 20 feet below ground surface (bgs) and centered on the former UST area to address impacted soil between November 11 and 19, 2015. Following excavation activities in November 2015, ATC oversaw the execution of three in-situ chemical oxidation (ISCO) injection events between January 6, 2016 and April 7, 2016 by Regenesis Remediation Services.

The groundwater is contaminated with volatile organic compounds (VOCs) associated with petroleum releases historically has been present in monitor wells MW-1 and MW-1A (source area), MW-4 (down gradient of source) and MW-9 (cross-gradient from source). MW-1 and MW-1A have contained

dissolved phase benzene, toluene, ethylene dibromide (EDB) and methyl tert butyl ether (MTBE) at concentrations exceeding their ADEQ established Aquifer Water Quality Standard (AWQS) or Tier 1 Cleanup Standard. MTBE was used as an oxygen booster in unleaded gasoline until approximately 2004. EDB was a lead scavenger added to leaded gasoline. Currently only MW-1A contains dissolved phase benzene and MTBE at concentrations that exceed applicable AWQS or Tier 1 Corrective Action Standards. However, the reporting limit for EDB is over the AWQS so the exact concentration in MW-1A may or may not exceed the AWQS.

ATC submitted a *Corrective Action Completion Repor*t with a LUST Case Closure request on behalf of the State Lead Unit. This report received September 13, 2018, and all other available site information has been used by ADEQ to determine whether remaining levels of contaminants at the site are adequately protective of human health and the environment. A site specific risk assessment and detailed file/information search were also completed.

Based upon the results of remedial activities and site specific information, the above-referenced LUST site is eligible for alternative LUST closure under Arizona Revised Statutes (A.R.S.) §49-1005(E). Arizona Administrative Code (A.A.C.) R18-12-263.04 allows case closure of a LUST site with groundwater contamination above the Arizona AWQS or Tier 1 Corrective Action Standards. ADEQ has considered the results of a site specific assessment and the rule specific criteria below:

1. Threatened or impacted drinking water wells: ATC conducted a search of the Arizona Department of Water Resources (ADWR) electronic database for all registered groundwater wells within a one-half mile radius of the approximate location assigned to LUST File No. 4968.01. The results of the search indicate that there are no ADWR-registered active drinking water wells within a one-half mile radius. According to ADWR records, there are 17 registered wells within the search radius. Of these, 15 entries are monitor and remediation wells and soil borings associated with the subject LUST site. There are two registered non-exempt irrigation wells. One well (55-619262) is 1450 feet south of the former USTs (cross gradient) and seems to be perforated from 702 to 1500 feet bgs and was modified circa 1982 to include perforation from 250 to 400 feet. The other well (55-619266) is 210 feet east (up gradient) of the former USTs and looks to be perforated 700 to 935 and 943 to 1820 feet bgs. These are both really deep and well outside the vertically impacted interval, as demonstrated by the depth-specific sampling at MW-1A in December 2015. A cursory review of water supply well logs for wells located within a two mile radius of the site indicate these wells are generally constructed with perforated intervals deeper than 200 feet bgs and are utilized for field irrigation. Based on laboratory analytical results of groundwater samples collected by ATC at the locations of monitor wells MW-1A, MW-4 and MW-9 on seven occasions following ISCO application events, suggest that the lateral extent of dissolved phase benzene does not extend to wells down gradient of MW-1A. The results also suggest that the concentration of dissolved phase MTBE decreases with distance down gradient of MW-1A. There are no potable public or private water production sources in the vicinity of this location and the foreseeable future installation of a potable water supply well in this area characterized by and zoned for agricultural use is unlikely. The potential for vertical migration of dissolved phase COC at the site was evaluated by collecting depth-discrete samples at the shallow and deep casings of well MW-1A at depths of 31 and 43 feet below top of casing, respectively on December 3, 2015. Dissolved phase benzene, toluene and MTBE were detected at concentrations of 89.2 µg/L, 856 µg/L and 74.4 µg/L in the groundwater sample collected at the top (MW-1A-31) and 1.84 µg/L, 42.0 µg/L and 1.49 µg/L at the bottom (MW-1A-43) of the water column, respectively. These data demonstrate the tendency of these COC to congregate at or near the top of the water column under site-specific hydrogeological conditions. Any new or replacement well located at or near this site would need to meet the criteria of A.A.C. R12-18-1302 (B) (3).

2. Other exposure pathways: Topographic elevation in the vicinity of the site generally decreases toward the southeast. The Harquahala Valley Irrigation District (HVID) irrigation canal is located approximately 300 feet west of the former UST location and on the west side of North 515th Avenue. Numerous field irrigation ditches are located on the east side of North 515th Avenue as close as 165 feet to the former USTs. Native soil types encountered during drilling activities supervised by ATC generally consisted of sand with varying percentages of silt and clay to at least 50 feet bgs, the maximum depth of exploration. In general, silt and sand is predominant from surface to approximately 20 feet bgs and clay and sand is predominant below 20 feet bgs. On October 26, 2015, ATC advanced soil boring SB-1A in the immediate vicinity of the location LUST File No. 4968.01. Soil samples were collected at five foot intervals at a depth of five feet bgs to 30 feet bgs and prepared for laboratory analysis of tetraethyl lead (TEL) using McCampbell Analytical, Inc. (MAI) Organic Pb Method and polynuclear aromatic hydrocarbons (PAH) using EPA Method 8270C-SIM. The sample collected at a depth of 30 feet bgs was also prepared for analysis of VOC using EPA Method 8260B. Laboratory analytical data indicates the presence of sorbed phase VOC including ethylbenzene, naphthalene, toluene, 1,2,4-trimethylbenzene (TMB), 1,3,5-TMB and total xylenes at concentrations exceeding their ADEQ established residential soil remediation levels (rSRLs) or ADEQ established minimum groundwater protection levels (GPLs) in the soil samples collected at the location of soil boring SB-1A at a depth of 30 feet bgs. TEL was not detected at concentrations exceeding its method reporting limit. Laboratory analytical results presented show various PAH were detected at concentrations exceeding their method reporting limits but below applicable rSRLs at boring SB-1A. Naphthalene was detected at concentrations above its ADEQ established rSRL at depths of 15 feet bgs and 20 feet bgs.

ATC oversaw the remedial excavation of contaminated soil in the immediate vicinity of the location of LUST File No. 4968.01 in November 2015. The excavation was completed to a depth of 20 feet bgs and included the former dispensers and the former UST basin. ATC collected 17 soil samples from the base (eight) and sidewalls (eight primary plus one field duplicate) of the excavation as it proceeded (Figure 3). The soil samples were prepared for analysis of VOC using EPA Method 8260B. Four soil samples collected at the base of the excavation were prepared and submitted for additional analysis of TEL using MAI Organic Pb Method. Laboratory analytical data presented indicates that various VOC were detected at concentrations exceeding their respective minimum laboratory limits. Ethylbenzene, naphthalene, 1,2,4-TMB, 1,3,5-TMB and total xylenes were detected a concentrations exceeding their respective ADEQ established rSRL and/or minimum GPL. It is noted that the samples containing VOC at concentrations above their respective ADEQ established rSRL and/or minimum GPL were collected at the base of the remedial excavation. No VOC at concentrations above their respective ADEQ established rSRL and/or minimum GPL were detected in the sidewall soil samples. TEL was not detected at concentrations above method reporting limits.

A soil vapor survey was conducted on May 29, 2018 to evaluate the potential for vapor intrusion into hypothetical, future site buildings. Four permanent soil vapor probes (SV-1 through SV-4) were installed to a depth of five feet bgs within 15 feet of the locations of groundwater monitor wells MW-1A and MW-4. ATC utilized the laboratory analytical results of the soil vapor samples collected at soil vapor probes SV-1 through SV-4 on May 29, 2018 for analysis of VOC using EPA Method TO-15 and the EPA on-line version of the Johnson and Ettinger (J&E) Model to perform a Tier 3 Risk Assessment. The Tier 3 Risk Assessment evaluation using the J&E Model indicates (for the chemicals evaluated) a “best fit” Excess Lifetime Cancer Risk (ELCR) of 7.405x10-7 and a Hazard Index (HI) of 2.495x10-2. These calculated values are below the target ELCR of 1x10-6 and HI of 1, which indicates an acceptable level of vapor

intrusion risk into hypothetical, concrete slab on-grade onsite buildings used for residential purposes. The nearest residential property is a single family home located approximately 500 feet south of the former UST area. No additional residences or schools, daycare facilities, hospitals or nursing homes were observed within a one-quarter mile radius of the site.

3. Groundwater plume stability: Based on groundwater elevation data collected on 20 occasions between August 3, 2011 and May 22, 2018 the average calculated flow direction is on a bearing of 319 degrees (northwest) under an average calculated gradient of 0.0070 foot per foot. Flow direction and gradient were calculated by performing a three-point graphical solution using the groundwater elevation determined at groundwater monitor well locations MW-2, MW-4 and MW-5. Historically the groundwater flow direction has been predominantly west-northwest. Since 2006, the depth to groundwater at the location of LUST File No. 4968.01 has ranged between approximately 25 and 35 feet bgs. Groundwater monitor wells MW-6 through MW-9 are located off-site and were installed by ATC in 2015. In order to evaluate the dissolved phase benzene, toluene, EDB and MTBE plume stabilities at groundwater monitor wells MW-1/MW-1A, MW-4 and MW-9, ATC analyzed the data collected during up to 24 groundwater monitoring and sampling (GM&S) events between March 9, 2011 and May 22, 2018 using the Mann-Kendall Statistical Method. Recently (since circa 2015), benzene has been detected at concentrations exceeding its ADEQ established AWQS at the locations of groundwater monitor wells MW-1/MW-1A, MW-4 and MW-9. The Mann-Kendall Statistical Method analysis indicates that the concentration of dissolved phase benzene is decreasing, stable or exhibits "No Trend" at these wells. It should also be noted that benzene was not detected at concentrations exceeding its minimum laboratory reporting limit (MRL) at MW-4 and MW-9 during the most recent GM&S event on May 22, 2018. Similar trends are demonstrated by dissolved phase MTBE. MTBE is stable, decreasing or exhibits "No Trend" at the location of each well where it has historically been detected at concentrations exceeding its Tier 1 Cleanup Standard. EDB and toluene have been historically detected at concentrations exceeding their respective ADEQ established AWQS only at the location of groundwater monitor well MW-1/MW-1A. Mann-Kendall analyses suggest that the concentrations of these constituents are stable and decreasing, respectively.

ATC analyzed the biodegradation and transport of dissolved phase benzene, toluene, EDB and MTBE down gradient of MW-1/MW-1A using BIOSCREEN Version 1.4. The BIOSCREEN software uses a combination of site-specific data and assumed values to simulate contaminant transport and attenuation through biodegradation. The software allows the user to analyze a groundwater plume under one of three assumptions regarding the rate of natural attenuation: No Decay, First-Order Decay or Instantaneous Decay. According to the EPA BIOSCREEN Natural Attenuation Decision Support System User's Manual, the First-Order Decay Model is most appropriate for petroleum hydrocarbon contamination. ATC utilized the BIOSCREEN Model to determine the maximum theoretical extent of the dissolved phase benzene, toluene, EDB and MTBE plumes relative to the LUST File No. 4968.01 (the source area). Using the first-order decay rate assumption, the model predicts that, of the four compounds selected in this analysis, MTBE will be detected the furthest distance down gradient at concentrations exceeding its ADEQ established Tier 1 Cleanup Standard of 94 µg/L approximately 45 feet in about 63 years. The model predicts EDB will be detected at a concentration exceeding its ADEQ established AWQS of 0.05 µg/L up to 36 feet down gradient in 15 years, and benzene will be detected at concentrations exceeding its ADEQ established AWQS of 5 µg/L 24 feet down gradient in five years. The model also predicts dissolved phase toluene will continue to be detected below its ADEQ established AWQS of 1,000 µg/L down gradient of monitor well MW-1A.

4. *Characterization of the groundwater plume:* Dissolved phase VOC laboratory analytical results of groundwater samples collected in September 2016, December 2016, March 2017, June 2017, July 2017 and May 2018 indicates that as of May 2018, dissolved phase benzene, MTBE and EDB (elevated reporting limit) are present at concentrations exceeding their respective ADEQ established AWQS or Tier 1 Cleanup Standards at the location of monitor well MW-1A. Dissolved phase toluene has also been detected at concentrations above its ADEQ established AWQS at MW-1A on three occasions since December 2016. Dissolved phase benzene has typically been detected at concentrations exceeding its ADEQ established AWQS at MW-4 typically between March 8, 2011 and July 31, 2017. Dissolved phase MTBE has been detected at concentrations exceeding its ADEQ established Tier 1 Cleanup Standard consistently between March 8, 2011 and July 31, 2017 and below its ADEQ established Tier 1 Cleanup Standard between March 3, 2016 and May 22, 2018.

5. *Natural Attenuation*: Natural attenuation processes include diffusion, dispersion, sorption, volatilization, and biodegradation. A decreasing trend in chemical concentrations in groundwater has been established, which supports natural attenuation is occurring. Hydrologic and geochemical data can be used to indirectly demonstrate the type(s) of natural attenuation processes. Monitored natural attenuation (MNA) like dissolved oxygen (DO) and redox potential (ORP), have been most recently collected between 2016 and 2018 to evaluate the groundwater conditions. The ORP is negative at the source area which indicates a reductive state in the groundwater. Away from the source area, the ORP is positive which indicates oxidative conditions. A high DO concentration indicates aerobic conditions and a low DO indicates anaerobic conditions. Benzene will biodegrade under either condition, but the preferred metabolic pathway is aerobic. ATC analyzed the biodegradation and transport of dissolved phase benzene, toluene, EDB and MTBE down gradient of MW-1/MW-1A using BIOSCREEN Version 1.4. The model supports that natural attenuation is occurring as previously mentioned in the *Groundwater Plume Stability* section.

6. *Removal or control of the source of contamination*. Source control has been completed by the UST system being permanently in October 1998. A soil vapor extraction (VE) and oxygen injection (OI) system operated between July 2009 and January 2011 and reportedly extracted an estimated 1,859 pounds (roughly 260 gallons) of vapor phase volatile fuel hydrocarbons (VFH). A four-day high vacuum dual phase extraction (DPE) pilot test was conducted January 6 through 10, 2014 by CalClean Inc. and approximately 158 pounds (nearly 23 gallons) of VFH and 11,978 gallons of impacted groundwater were extracted during the pilot test. A soil excavation which centered on the former UST area to address impacted soil was completed between November 11 and 19, 2015. Approximately 535.9 tons (roughly 357 cubic yards) of soil was excavated and transported off-site for disposal as non-hazardous waste. Three in-situ chemical oxidation (ISCO) injection events occurred between January 6, 2016 and April 7, 2016 at the locations of groundwater monitor wells MW-1A, MW-3, MW-4, MW-7 and MW-9.

7. *Requirements of A.R.S. §49-1005(D) and (E):* The results of the corrective action completed at the site assure protection of public health, welfare and the environment, to the extent practicable, the clean-up activities competed at this site allow for the maximum beneficial use of the site, while being reasonable, necessary and cost effective.

8. *Other information that is pertinent to the LUST case closure approval*: The facility and LUST files were reviewed for information regarding prior cleanup activities, prior site uses and operational history of the UST system prior to removal.

Groundwater data for MW-1/MW-1A (source area)

Date	Benzene AWQS is 5 µg/L	Toluene AWQS is 1,000 µg/L	MTBE Tier 1 Corrective Action Standard is 94 µg/L	EDB AWQS is 0.05 µg/L	Depth to water (ft.)
March 2011	**530**	**1,600**	**250**	**20**	26.03
May 2011	**870**	**3,100**	73	**6.4**	25.55
August 2011	**1,000**	**3,500**	**160**	---	25.62
August 2012	**900**	**1,600**	40	---	26.67
August 2013	**680**	1,100	31	---	26.82
June 2014	**590**	870	30	---	27.95
September 2015	**275**	2,400	120	**<5.00**	30.30
October 2015 MW-1 removed	---	---	---	---	---
December 2015	**89.2/88.5**	829/850	74.4/71.1	**<1.00/<1.00**	31 (depth specific)
December 2015	1.84	42.0	1.49	**<1.00**	43 (depth specific)
January-April 2016 ISCO	---	---	---	---	---
March 2016	**7.41**	69.1	7.81	---	30.84
June 2016	**5.30**/4.02	<5.00/<5.00	20.7/20.4	**1.23/1.18**	31.18
September 2016	**63.7/72.2**	420/499	**103/113**	**<50.0/<50.0**	30.86
December 2016	**270/278**	**2,920/3,010**	**203/218**	**<100/<100**	30.33
March 2017	**180/257**	**2,950/3,760**	**172/190**	**<50.0/<50.0**	30.33
June 2017	<1.00/<1.00	<1.00/<1.00	<1.00/<1.00	**<1.00/<1.00**	31.10
July 2017	**320**	**4,740**	**266**	**<25.0**	31.42
May 2018	**89.2/88.7**	562/555	**206/214**	**<10.0/<10.0**	31.59

Groundwater data for MW-4 (off-site down gradient of source)

Date	Benzene AWQS is 5 µg/L	Depth to water (ft.)
March 2011	**260**	26.78
May 2011	**370**	26.56
August 2011	**490**	26.67
August 2012	**550**	27.56
August 2013	**940**	27.76
June 2014	**820**	28.74
September 2015	**1,060**	34
September 2015	**1,150/1,110**	38
January-April 2016 ISCO	---	---
March 2016	<1.00/<1.00	31.85
June 2016	<1.00	32.17
September 2016	**6.96**	32.07
December 2016	**101**	31.45

March 2017	**161**	31.35
June 2017	**156**	32.08
July 2017	**5.72/6.77**	32.47
May 2018	<1.00	32.64

Groundwater data for MW-7 (off-site down gradient of MW-4)

Date	**Benzene AWQS is 5 µg/L**	**Depth to water (ft.)**
December 2015	<1.00	31 (depth specific)
December 2015	<1.00	42 (depth specific)
March 2016	<1.00	30.31
June 2016	<1.00	30.53
September 2016	<1.00	30.43
December 2016	<1.00	29.80
March 2017	<1.00	29.66
June 2017	<1.00	30.44

Groundwater data for MW-9 (off-site to the west of MW-4)

Date	**Benzene AWQS is 5 µg/L**	**Depth to water (ft.)**
December 2015	**10.8**	35 (depth specific)
December 2015	**8.22**	47 (depth specific)
January-April 2016 ISCO	---	---
March 2016	<1.00	34.58
June 2016	<1.00	34.84
September 2016	**6.02**	34.83
December 2016	**12.4**	34.19
March 2017	**18.3**	34.03
June 2017	**5.66**	34.81
July 2017	**7.01**	35.20
May 2018	<1.00	35.35

Groundwater data for MW-5 (off-site to the west of MW-9)

Date	**Benzene AWQS is 5 µg/L**	**Depth to water (ft.)**
August 2011	<1.00	29.33
August 2012	<1.00	30.10
August 2013	0.62	20.29
June 2014	<1.00	31.14
September 2015	1.02	33.39
March 2016	<1.00	33.67
June 2016	<1.00	34.12

September 2016	<1.00	34.27
December 2016	<1.00	33.62
March 2017	<1.00	33.37
June 2017	<1.00	34.18

Site specific information concerning this closure is available for review during normal business hours at the ADEQ Records Center http://www.azdeq.gov/function/assistance/records.html , 1110 W. Washington St., Suite 140, Phoenix, AZ 85007. ADEQ welcomes comments on the proposed LUST case closure. Please call the Records Center at 602-771-4380 to schedule an appointment. A 30-day public comment period is in effect commencing **December 7, 2018 and ending January 7, 2019**. Comments may be submitted by mail or email. Written comments should be sent to:

Arizona Department of Environmental Quality
Waste Programs Division
Attn: Debi Goodwin
1110 W. Washington Street
Phoenix, AZ 85007

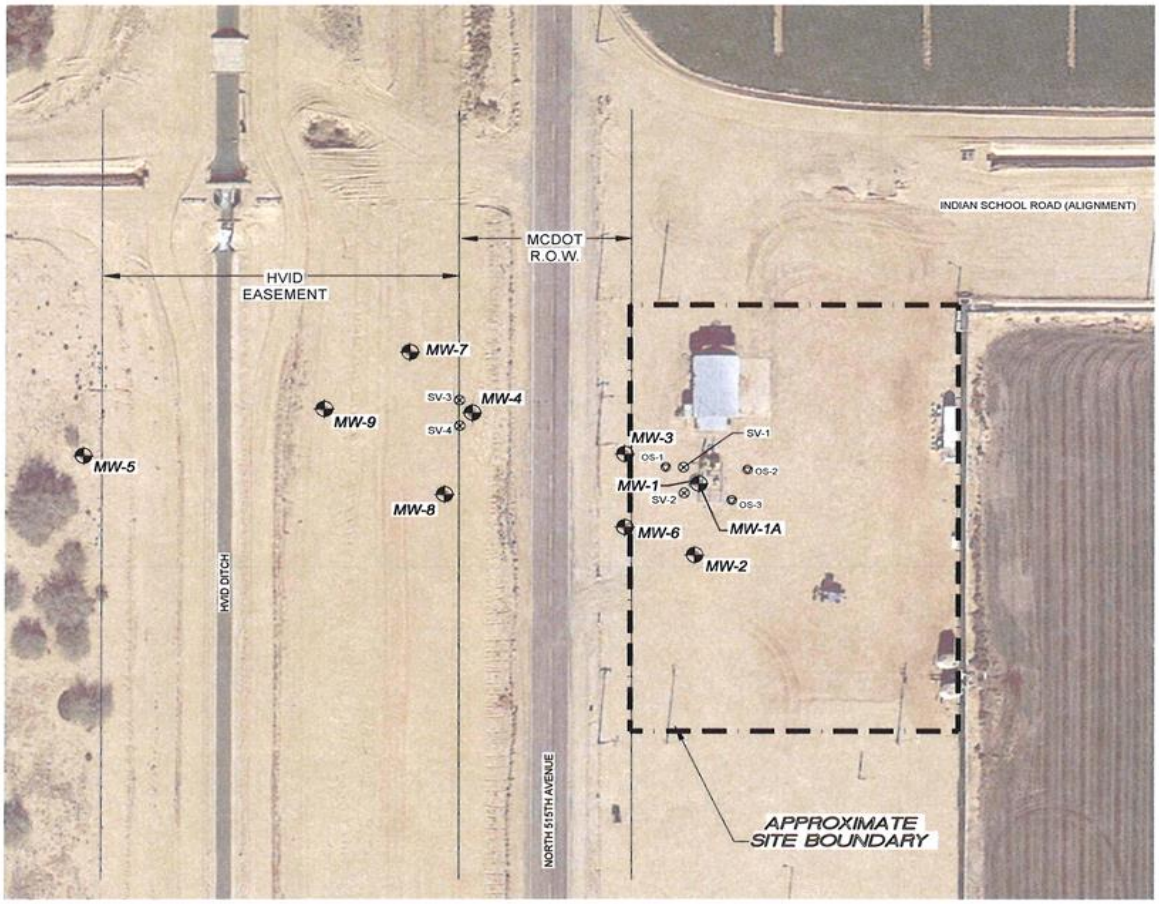
or electronically mailed to: dg1@azdeq.gov.

If sufficient public interest is demonstrated during the public comment period, ADEQ may announce and hold a public meeting. ADEQ will consider all submitted comments and reserves the right to respond to those comments following the public comment period. For more information on this notice, please contact the Sr. Risk Assessor, Debi Goodwin at (602) 771-4453 or at dg1@azdeq.gov or the Project Manager, Kelsey Hammond at (602) 771-4265 or at kh9@azdeq.gov.

Copies of the cited statutes and rules can be found at:
http://www.azleg.gov/ArizonaRevisedStatutes.asp?Title=49, and
http://www.azsos.gov/public_services/Title_18/18-12.htm

ADEQ will take reasonable measures to provide access to department services to individuals with limited ability to speak, write or understand English and/or to those with disabilities. Requests for language interpretation, ASL interpretation, CART captioning services or disability accommodations must be made at least 48 hours in advance by contacting Ian Bingham, Title VI Nondiscrimination Coordinator at 602-771-4322 or Bingham.Ian@azdeq.gov. Teleprinter services are available by calling 7-1-1 at least 48 hours in advance to make necessary arrangements.

ADEQ tomará las medidas razonables para proveer acceso a los servicios del departamento a personas con capacidad limitada para hablar, escribir o entender inglés y / o para personas con discapacidades. Las solicitudes de servicios de interpretación de idiomas, interpretación ASL, subtitulados de CART, o adaptaciones por discapacidad deben realizarse con al menos 48 horas de anticipación contactando a Ian Bingham, Coordinador de Anti-Discriminación del Título VI al 602-771-4322 o Bingham.Ian@azdeq.gov. Los servicios de teleimpresores están disponibles llamando al 7-1-1 con al menos 48 horas de anticipación para hacer los arreglos necesarios.



LEGEND

- GROUNDWATER MONITOR WELL
- OXYGEN SPARGE WELL
- ABANDONED GROUNDWATER MONITOR WELL (MW-1)
- SOIL VAPOR SAMPLE PROBE (2018)

HVID HARQUAHALA VALLEY IRRIGATION DISTRICT

0 100 200

SCALE, FT

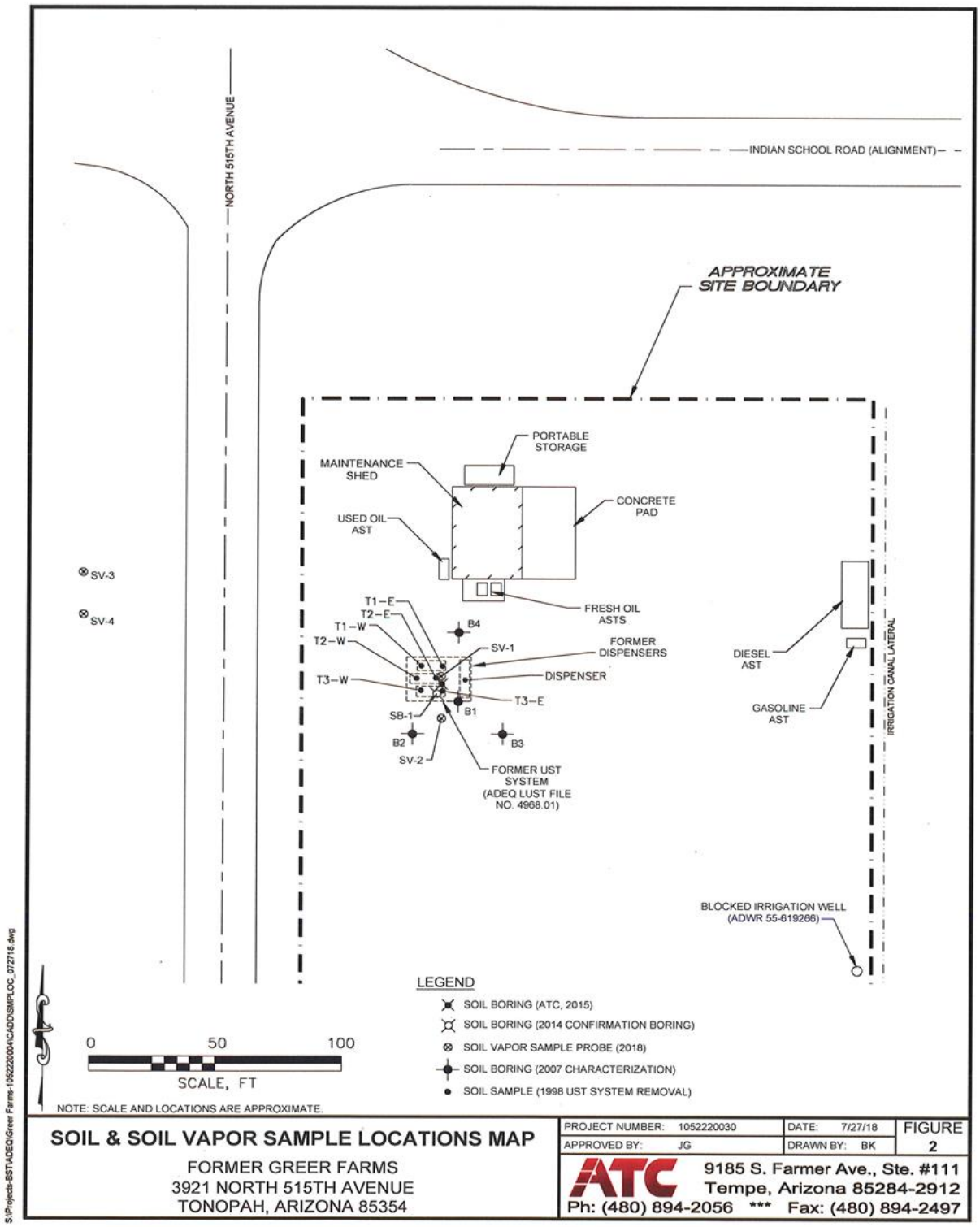
NOTE: SCALE AND LOCATIONS ARE APPROXIMATE.

SITE MAP

FORMER GREER FARMS
3921 NORTH 515TH AVENUE
TONOPAH, ARIZONA 85354

PROJECT NUMBER: 1052220030		DATE: 9/11/18	FIGURE 4
APPROVED BY: JG		DRAWN BY: BK	

ATC
9185 S. Farmer Ave., Ste. #111
Tempe, Arizona 85284-2912
Ph: (480) 894-2056 *** Fax: (480) 894-2497

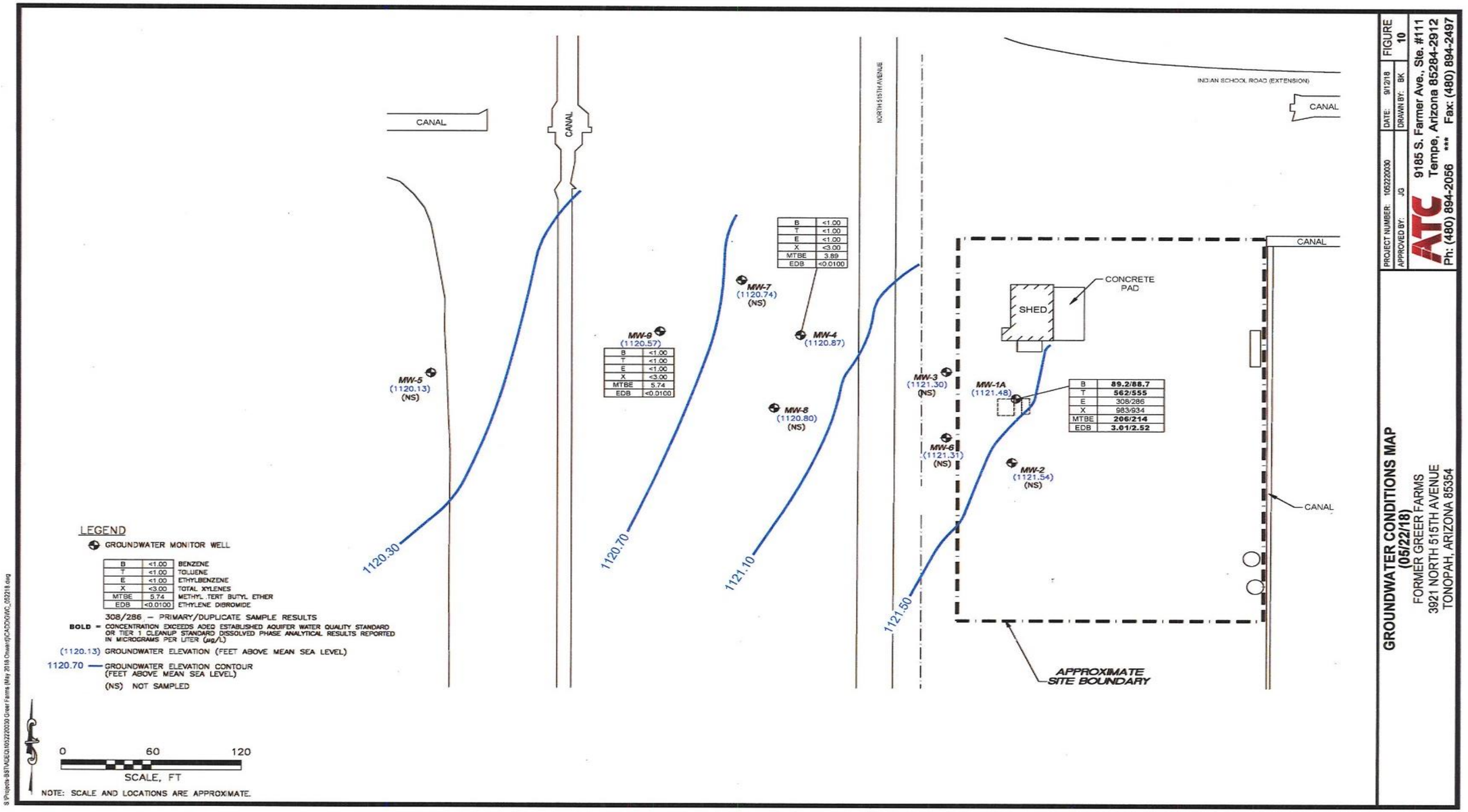


SOIL & SOIL VAPOR SAMPLE LOCATIONS MAP

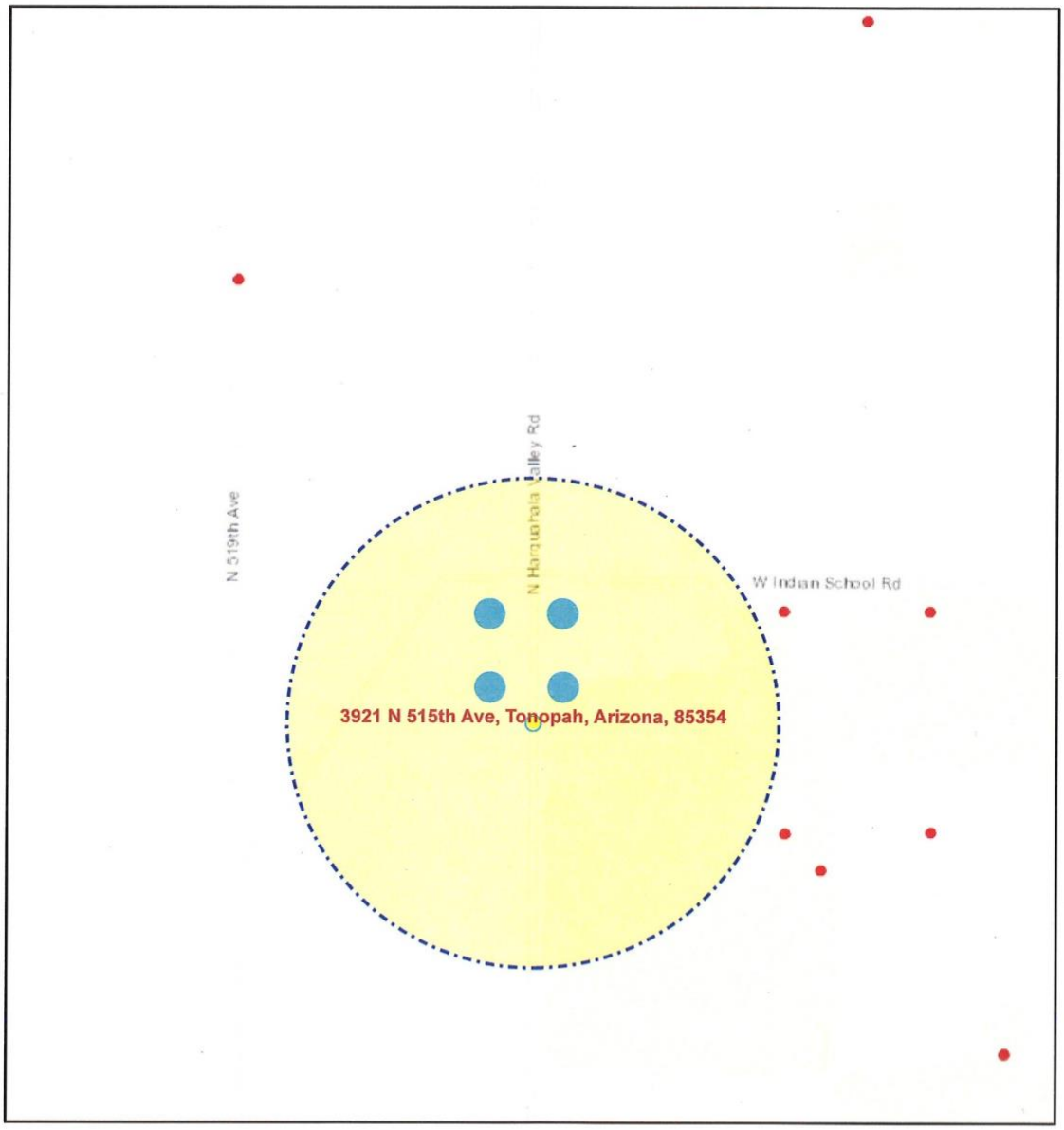
FORMER GREER FARMS
3921 NORTH 515TH AVENUE
TONOPAH, ARIZONA 85354

PROJECT NUMBER: 1052220030		DATE: 7/27/18	FIGURE 2
APPROVED BY: JG		DRAWN BY: BK	

ATC
9185 S. Farmer Ave., Ste. #111
Tempe, Arizona 85284-2912
Ph: (480) 894-2056 *** Fax: (480) 894-2497


CANAL
CANAL
CANAL
INDIAN SCHOOL ROAD (EXTENSION)
NORTH 515TH AVENUE
CANAL
CONCRETE PAD
SHED
MW-5 (1120.13) (NS)
MW-9 (1120.57)
B <1.00
T <1.00
E <1.00
X <3.00
MTBE 5.74
EDB <0.0100
MW-7 (1120.74) (NS)
B <1.00
T <1.00
E <1.00
X <3.00
MTBE 3.89
EDB <0.0100
MW-4 (1120.87)
MW-8 (1120.80) (NS)
MW-3 (1121.30) (NS)
MW-1A (1121.48)
B 89.2/88.7
T 562/555
E 308/286
X 983/934
MTBE 206/214
EDB 3.01/2.52
MW-6 (1121.31) (NS)
MW-2 (1121.54) (NS)
1120.30
1120.70
1121.10
1121.50
CANAL
APPROXIMATE SITE BOUNDARY
LEGEND
GROUNDWATER MONITOR WELL
B <1.00 BENZENE
T <1.00 TOLUENE
E <1.00 ETHYLBENZENE
X <3.00 TOTAL XYLENES
MTBE 5.74 METHYL TERT BUTYL ETHER
EDB <0.0100 ETHYLENE DIBROMIDE
308/286 – PRIMARY/DUPLICATE SAMPLE RESULTS
BOLD = CONCENTRATION EXCEEDS ADEQ ESTABLISHED AQUIFER WATER QUALITY STANDARD OR TIER 1 CLEANUP STANDARD DISSOLVED PHASE ANALYTICAL RESULTS REPORTED IN MICROGRAMS PER LITER (µg/L)
(1120.13) GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
1120.70 GROUNDWATER ELEVATION CONTOUR (FEET ABOVE MEAN SEA LEVEL)
(NS) NOT SAMPLED
0 60 120
SCALE, FT
NOTE: SCALE AND LOCATIONS ARE APPROXIMATE.
S:\Projects-931\ADEQ\105222\0030 Greer Farms (May 2018 Onward)\CAD\GWC_052218.dwg
PROJECT NUMBER: 105222\0030
APPROVED BY: JG
DATE: 9/12/18
DRAWN BY: BK
FIGURE 10
ATC
9185 S. Farmer Ave., Ste. #111
Tempe, Arizona 85284-2912
Ph: (480) 894-2056 *** Fax: (480) 894-2497
GROUNDWATER CONDITIONS MAP
(05/22/18)
FORMER GREER FARMS
3921 NORTH 515TH AVENUE
TONOPAH, ARIZONA 85354

Greer Farms



November 6, 2018

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Arizona Department of Water Resources, Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS

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